

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-19. (cancelled)

20. (currently amended) A system for dispensing a reactant mixture on a workpiece, the system comprising:

a robot having a moveable arm;

a base supply and a catalyst supply for providing a base and a catalyst, respectively, the base and catalyst supplies being disposed apart from the robot;

a metering ram disposed apart from the robot for injecting the base and catalyst, the metering ram being coupled to the base supply by a flexible base supply conduit and to the catalyst supply by a flexible catalyst supply conduit, the flexible base and supply conduits having base and catalyst shutoff valves that permit flow in two directions and can be actuated to inhibit for inhibiting base and catalyst from flowing from the metering ram to the base and catalyst supplies, respectively;

base and catalyst flow meters for measuring a characteristic pressure and volume of the base and catalyst flowing therethrough, the base and catalyst flow meters being coupled to the metering ram by a flexible base conduit and a flexible catalyst conduit, respectively; and

a mixing chamber coupled to the base and catalyst flow meters by rigid base and junction conduits, respectively, the mixing chamber being attached to the moveable robot arm and having a removable nozzle for dispensing a reactant mixture formed in the mixing chamber; and

a base valve disposed in the rigid base conduit between the base flow meter and the mixing chamber and a catalyst valve disposed in the rigid catalyst conduit between the catalyst flow meter and the mixing chamber, the base and catalyst valves permitting flow in two directions;

wherein the base and catalyst valves are the only valves disposed between the metering ram and the mixing chamber;

wherein the rigid base and junction conduits are configured to resist expansion so that desired amounts of the base and the catalyst are provided to the mixing chamber to form the reactant mixture more than the flexible base and catalyst conduits;

wherein the characteristic of the base provided by the base flow meter stops actuation of the metering ram and closes the base valve when the pressure of the base exceeds a predetermined base pressure value and the characteristic of the catalyst provided by the catalyst flow meter stops actuation of the metering ram and closes the catalyst valve when the pressure of the catalyst exceeds a predetermined catalyst pressure value, thereby providing a desired amount of base and catalyst irrespective of expansion of the flexible base and catalyst conduits; and

wherein the volume of the base provided by the base flow meter causes rejection of the workpiece when the volume of the base exceeds a predetermined base volume value or when the volume of the catalyst provided by the catalyst flow meter exceeds a predetermined catalyst volume value.